

**Sedimentary and Geochemical Processes Panel
Spring Meeting, 1993
4-6 March 1993, Santa Cruz, CA**

Executive Summary

The primary work of the Spring thematic panel meetings is to make a global ranking of the active ODP proposals, in addition to reviewing the new and revised proposals that have been received since the last meetings. During this SGPP meeting, 12 revised proposals, 7 new proposals and 2 letters of intent were handled by the panel prior to making the global ranking. The panel then discussed all active proposals (27) previously listed as category 4 or 5 proposals by SGPP and reduced the list to be ranked to a total of 16. These 16 proposals were then ranked by the votes of the panel members, with the top ranked proposal being No. 1. Proponents were excluded from voting on their own proposals. Scores were assigned by normalizing rank to number of votes cast. The results are basically consistent with the results of previous SGPP global rankings. The top 6 proposals with their scores and drillability are as follows:

SGPP Spring Global Ranking 1993

Ref. No.	Proposal (ODP Number)	Drillable in FY95	Score	Ranking
423	Gas Hydrate Sampling	yes	14.9	1
412, 412Add.	Bahamas Transect	yes	13.1	2
380Rev3./059	VICAP/MAP	yes	12.2	3
391Rev.	Mediterranean Sapropels	yes	11.7	4
400Add.	Middle Am. Trench/Costa Rica	yes	11.2	5
SR-Rev.	Sedimented Ridges II	yes	9.9	6

Because the current drilling program of Leg 150 New Jersey Transect, in its revised form, would not meet the original SGPP thematic objectives for this leg and will not contribute to tests of the sequence stratigraphic model, the majority of the panel decided after discussion to make a second ranking of the top 6 ranked proposals, as listed above, plus a New Jersey Margin II, derived from proposed sites not drilled on Leg 150. With this second vote, SGPP wishes to express its strong support to make every effort to complete the New Jersey Transect, an objective which is essential for achieving the stated sea level objectives, as outlined in the original proposal (SGPP's highest ranked proposal in the FY93 Prospectus) and the Sea Level WG Report. The outcome of this final vote, and the names of the watchdogs assigned to each proposal, are listed below:

Ref. No.	Proposal (ODP Number)	Score	Ranking	Watch Dog
423	Gas Hydrate Sampling	6.7	1	Swart
----	New Jersey Margin II	4.5	2	Paull
412, 412Add.	Bahamas Transect	4.4	3	Sarg
391Rev.	Med. Sapropels	3.6	4	McKenzie
380Rev3./059	VICAP/MAP	3.5	5	Hiscott
400Add.	Middle Am. Trench/Costa Rica	2.8	6	Underwood
SR-Rev.	Sedimented Ridges II	2.2	7	Sayles

With the top ranked proposals in this global ranking, all of the 5 themes identified in SGPP's White Paper (JOIDES Journal, June, 1990) are well represented; Sea Level (2), Sediments (1), Fluids (1), Metallogenesis (1), Paleoocean (1). In addition, a proposal for dedicated gas hydrate drilling, a new theme identified by SGPP with a solicitation for proposals advertised in the JOIDES Journal (Oct., 1991), now exists and is ready to be drilled in FY95.

SGPP ACTION ITEMS:

- (1) SGPP recommends that an ODP policy for cutting and splitting finely laminated, organic carbon-rich sediment cores, such as those recovered in the Santa Barbara Basin, be established to protect core integrity and sedimentary structures.
- (2) SGPP recommends that proposals more than 3 years old should be re-submitted as a full proposal with updated science, rather than simply amended via a letter progress report. There is a general consensus that this would be a good idea because of the turnover in panel membership and the longevity of panel memory.
- (3) SGPP notes emphatically that the availability of CORKS for Leg 156 North Barbados Ridge is absolutely essential for the scientific objectives of this leg to be achieved.
- (4) SGPP formally endorses the prepared In Situ Pore-Fluid Sampling RFP and strongly urges PCOM to fund this feasibility study in order to make technological progress towards achieving the goal of in situ pore-fluid sampling in hard rocks. This goal has multi-panel support. Currently no such fluid sampling tools for hard rocks are available to ODP.
- (5) SGPP recommends that there be continued field testing of the Pressure Core System (PCS), specifically on the upcoming Leg 150. Continued testing is essential as an operational PCS will be very important should a dedicated gas hydrate drilling leg be scheduled in FY95.
- (6) SGPP endorses the recommendation of the JOIDES Advisory Structure Review Committee that "Panels need to be sensitive to the need for occasional joint meetings with other panels having related objectives." The success of our recent joint meeting with OHP, hosted by Margaret Delaney in Santa Cruz, CA, is an example of what can be achieved by bringing the members of two panels together in a working atmosphere conducive to exchange and discussion. As SGPP has a multiple overlap of thematic interests with TECP, it was deemed appropriate that a joint SGPP/TECP meeting be organized. With this objective in mind, Richard Hiscott, the Canadian/Australian SGPP member, has agreed to host a joint SGPP/TECP Fall Meeting in Corner Brook, Newfoundland on 18-21 September 1993.

**Sedimentary and Geochemical Processes Panel
Spring Meeting, 1993**

Preliminary Minutes

Date: Thursday-Saturday, 4-6 March 1993
Place: Meeting Rooms, Dream Inn, Santa Cruz, CA
Host: Margaret Delaney, OHP Chair, University of California

Attendees:

SGPP members:

Jean Bahr (USA), Recorder	Jacques Boulègue (F)
Henry Elderfield (at large)	Paul Farrimond (UK)
Robert Garrison (USA)	Richard Hiscott (Can-Aus)
Judith A. McKenzie (at large), Chair	Charles Paull (USA)
Rich Sarg (USA)	Fred Sayles (USA)
Wonn Soh (J)	Finn Surlyk (ESF)
Peter Swart (USA)	Michael Underwood (USA)
Ranier Zahn (alt. G)	

SGPP members unable to attend:

Jeffrey Alt (USA)	Kay Emeis (G)
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SGPP liaisons:

Wolfgang Berger - PCOM	Andy Fisher - ODP/TAMU
Peter de Menocal - L-DEO	Robert Zierenberg - LITHP

Invited guests for all or part of the SGPP meeting:

William Hay - JOIDES Advisory Structure Review Committee (5-6 March)
Miriam Kastner - Shipboard Geochemist Leg 146 (6 March)
Casey Moore - Shipboard Logging Scientist Leg 146 (4 March)
Harold Tobin - Shipboard Structural Geologist/Sedimentologist Leg 146 (4 March)
Tim Francis - ODP/TAMU (4-5 March)
Tom Pettigrew - ODP/TAMU (5-6 March)
Elizabeth Ambos - NSF (5-6 March)

I. WELCOMING REMARKS AND INTRODUCTIONS

Welcoming remarks were delivered to the panel by Gary Griggs, Director of Marine Sciences at UCSC later in the morning. General introductions of the participants were made and the primary objectives of the Spring SGPP meeting were outlined.

II. REPORTS

1. PCOM REPORT (Wolfgang Berger)

Berger commented that SGPP did well in upcoming scheduling, in part due to effective presentations by the panel chair. One exception is the Mediterranean Sapropels proposal. PCOM concerns included questions of whether the drill ship is really needed for this project. Stronger support from OHP and an improved presentation of the geochemical objectives might also help.

With regard to the safety problems with Leg 150, Berger speculated that there may be some members of the safety panel who are opposed to shallow drilling "on principle".

Funding for ODP over the near future is likely to be flat, which will mean competition between needs. Commenting on the likelihood of proposal success at PCOM, Berger noted that multileg programs seem to face an uphill battle. Working groups provide great rationales for drilling but can suffer from the lack of individuals to act as strong proponents. Panels should push thematic emphasis and designate individuals to guide themes and proposals coming out of working groups.

Trends for the near future include an increased emphasis on logging and deep drilling. This means increased resources devoted to technology and a tradeoff between physical samples and other types of data (e.g. logs). There is also a move toward real time data processing. The panels should provide input to what level of real time processing is needed and useful.

CD-ROMs of drilling data are being compiled for recent legs. Is this data format important to the panel?

In reviewing proposals, panels should pay attention to the need for drilling, time estimates, and safety.

During Berger's presentation, Tim Francis commented on the Canadian funding situation. Currently, Canadian support is scheduled to end in September 1993. Richard Hiscott noted that partial funding of the Canadian membership is still available through the NSF-equivalent and other Canadian funding sources may become available. One conclusion of this discussion was that, regardless of the number of partners, funding will remain tight and the panel will need to be focussed in its interests and priorities.

2. ODP SCIENCE AND OPERATIONS REPORT (Andy Fisher)

Leg 146, Santa Barbara coring: There were some technical problems which precluded complete double coring. Because of end-of-leg time constraints and the fact that none of the Leg 146 shipboard scientists were involved in the science of the Santa Barbara drilling, cores were not run through the multichannel track on board. They were supposed to be logged at TAMU, but in the end cores were not run through a multisensor track prior to cutting because the system that was supposed to be available for this (from a source outside of TAMU) was not completely operational. Berger reported that he had heard that damage had been done to the cores by the use of inappropriate splitting procedures. The scientists who came to TAMU were apparently expecting to open the cores themselves but this was done prior to the arrival of the sampling party. There seems to have been a communications gap and Fisher promised to relay concerns over this to TAMU. In addition, it seems advisable to document core handling needs for this type of sediment, which would also be encountered by future proposed drilling on the California Coast.

RECOMMENDATION: An ODP policy for cutting and splitting finely laminated, organic carbon-rich sediment cores should be formulated to protect core integrity and sedimentary structures.

There was a brief general discussion of potential problems with add-on legs and what had been learned from this experience.

Leg 147, Hess Deep: The exciting result of this leg, for petrologists, was the recovery of "fresh" (only 80% altered) ultramafic rocks. The ship served as a precise and deeply penetrating dredge, but operational goals were not achieved. Fisher documented technical difficulties with setting hard rock guide bases when sediments were present at the surface. In addition, 4 bottom hole assemblies were lost during the leg. Hardware costs were on the order of \$450,000 compared to \$200,000 for a typical leg, and additional drill collars had to be shipped at extra expense for the

subsequent leg. In response to a question, Tim Francis noted that these extra expenditures will have budgetary impacts for tool development or non-engineering wish-list items, but not for basic operations. One lesson learned was the need to know exactly the type of surface that the guide base will be set on. Some of the problems with this leg might have been prevented by more timely and detailed site survey information. Robert Zierenberg commented that both LITHP and TECP recommended detailed site surveys prior to this type of drilling. It appears that the scheduling of this leg was somewhat premature.

Leg 148, Return to 504B (in progress): 110 m were drilled before a coring bit and assorted material got stuck in the hole. A variety of fishing and milling attempts were made, requiring obtaining special jars and a fishing expert. These were eventually successful in clearing most of the hole, to permit logging, but there is still approximately 20 m of rubble at the base of the hole above the original coring bit. While waiting for the arrival of the fishing jars, a second hole was drilled through 170 m of sediment and about 180 m into basement. This second hole was located on a heat flow high and the alteration in the shallow crust is quite different from that observed in 504B. Both the new hole and 504B are being logged. The borehole televiewer failed as did the VSP, but the standard Schlumberger logs were run. A second VSP attempt is planned. The question was raised as to whether the results of Leg 148 will now mean an end of the returns to 504B. An answer was not forthcoming.

Fisher reported that three new tools are going out on the ship: a whole core X-radiograph, a spectral gamma core logging system, and hard rock orientation tools. Technical Note #10, describing downhole tools, is being updated and will include a compilation of tool use and results from previous legs.

3. LEG 146 CASCADIA MARGIN REPORT (Casey Moore)

Moore described VSP results from Leg 146 which indicate that the strong reflection of the BSR at the sites drilled is the result of low velocities (due to free gas) below the BSR rather than by velocity contrasts due to the presence of an extensive hydrate. The temperature profiles recorded in the holes are not entirely consistent with existing phase diagrams of hydrate stability (at least for pure methane hydrates?). Very little actual hydrate was recovered (and only from fairly shallow depths) although temperature measurements made in one core were consistent with hydrate sublimation. This suggests that the hydrates above the BSR do not completely fill the pore space but instead exist as a somewhat disseminated phase. Gas migration would then be limited by the phase change rather than by the presence of a permeability barrier created by hydrate accumulation.

A packer test was conducted in one hole that crossed a fault. Measured pressures were relatively low, but may have been perturbed by drilling. This hole has been CORKed and will be revisited by Alvin to obtain pressure and temperature records. A drawdown test is also planned with Alvin.

There was a general discussion of potential safety concerns of drilling through the BSR. In the Leg 146 case, the underlying free gas was not significantly overpressured. Reflectors intersecting the BSR might be an indication of a seal associated with overpressures. Charlie Paull noted that large amounts of hydrate were not anticipated at the location drilled during Leg 146 because of the absence of blanking zones above the BSR.

4. L-DEO BOREHOLE RESEARCH GROUP REPORT (Peter de Menocal)

Leg 145: Some problems were encountered due to the presence of ice-rafted sediment and this resulted in the loss of a pad arm on the FMS. The French magnetometer and susceptibility tools worked very well on the sediments. Gamma ray

logs were useful in showing variations in concentrations of terrigenous sediment. These ice rafted materials can interfere with other measurements such as GRAPE density.

Leg 146: Comparison of caliper and gamma logs indicates that cave-ins occurred in the sandy intervals. Sonic velocity did not have a noted change at the BSR. The shallow penetration of sonic velocities and the strong effects of carbonate veins can cause difficulties in constructing synthetic seismic lines. The FMS log was useful in identifying fractures.

Other developments from L-DEO: New high-resolution logging techniques, which can enhance resolution considerably from the current 0.5 m., will be tested on Leg 149. This adds approximately 1 hour per 100 m of logging. CD-ROMs of logging data exist for Leg 138 and will be prepared for Legs 143-144. There was some discussion of whether data on CD-ROMs would be updated after the cruise. The answer was that data on CD-ROMs will represent status of data as of the first post-cruise meeting. Revised data can be obtained from Lamont via FTP. A core-log integration platform is being developed for shipboard use.

5. SAFETY PROBLEMS FOR LEG 150 (Tim Francis)

There are several safety issues related to shallow drilling. The first is the capability of the ship to drill in shallow water. A shallow water trial of the dynamic positioning system at Eniwetok indicated that it would be feasible to drill in some shallow locations. The second issue is a safety review related to the possible presence of shallow gas. A blowout can occur even from relatively small (i.e. non-economic) accumulations of gas and this is difficult to control with mud weight at shallow depths. Dynamically positioned rigs are somewhat more stable than anchored rigs in cases of a blowout. Leaving an open blowing hole would jeopardize ODP's safe drilling record and approval of future legs. In order to avoid these problems, a detailed hazards survey is required. Academic institutions do not have the capabilities to do these kinds of seismic surveys. No such survey was available for the New Jersey shelf. The only possible source would be from industry. Another need is for shipboard gas monitoring capabilities.

Leg 150 is now exclusively a slope leg rather than a shelf leg, after being cancelled and then revived through a major change in scientific objectives. As currently scheduled, it will not provide the type of data needed from the shelf for SGPP sea level objectives. In order to avoid future problems of this type, PCOM has set up a shallow water drilling group to set criteria and procedures for assessing safety before scheduling future shallow legs. One failure of the current procedures is that a safety review does not occur before PCOM has approved a leg. Procedures for pre-review of legs, prior to approval of scheduling, are to be developed. It was also noted that in earlier times, proposals which had safety questions never made it out of the panels.

There was some discussion of whether salvaging Leg 150 in its present form was preferable to cancellation. It was concluded that the two end-members (continental and deeper water sites) of the New Jersey transect will have been accomplished with the upcoming ODP and continental drilling programs. It now becomes essential that planning begin to guarantee that the intermediate sites along the transect will be drilled.

6. LEG 156 BARBADOS UPDATE (Casey Moore)

Seismic processing is on schedule and a pre-safety review is scheduled for April. A borehole seal proposal was submitted NSF. (No word was available at the time of the meeting on funding.) A joint French/US proposal has been submitted for return and retrieval of cork data. Peter Swart is the primary watchdog for this and will report at the Fall SGPP meeting. Tim Francis questioned whether the leg should proceed if

corks are not available. The panel replied that the corks are absolutely essential to the objectives of this leg.

LUNCH BREAK

[Distribution of Advisory Structure Review Committee Report and GRAPE evaluation, and circulation of fax/e-mail list for updating]

7. DMP LIAISON REPORT (Jean Bahr)

Issues discussed at the recent DMP meeting and which are of particular interest to SGPP included: a) need for a formal endorsement (letter) by SGPP of the fluid sampling RFP in order to urge PCOM to fund this feasibility study, b) status of the pressure core sampler and the need for PI initiatives to move to phase II development, c) CORK status and use, again emphasizing the need for PI involvement in design of specific deployments and in funding any monitoring equipment to be left in the hole, d) GEOPROPS status (basically this tool does not work), e) removal of pressure sensing capabilities from the WSTP and reports on its use on Leg 146, f) DMP concerns about feasibility of logging and other operations in potentially unstable holes on the upcoming Barbados leg and in hot holes on the TAG leg (these issues are to be discussed with proponents at the May meeting of DMP), g) availability of a new brochure on downhole measurements, and h) a request for input from SGPP to DMP including an offer for a joint meeting.

8. LITHP LIAISON REPORT (Robert Zierenberg)

Top ranked proposals of LITHP at its Fall meeting were 1) Mid-Atlantic Ridge, 2) TAG, 3) NARM, 4) VEMA, 5) VICAP/MAP, and 6) Barbados. LITHP strongly supported coring of 395A as an add-on to a leg. They accepted the working group report on offset drilling. LITHP recommended that the next site for DCS testing should be chosen to maximize possibilities for success. Noting the number of proposals for drilling in the Caribbean, LITHP recommends a detailed planning group to design/coordinate legs in this area. Does SGPP have significant interest in or issues to bring to this DPG? (The answer is no.) In-situ sampling is a higher priority than a high temperature sampler for LITHP. LITHP discussed re-entry borehole utilization and would object to uses that do not consider future usefulness of the hole. LITHP will be revising its white paper and is considering some sort of open meeting to solicit input from the broader community. They have appointed liaisons to other global geoscience programs. LITHP will hold a joint meeting with DMP in the fall.

IIIA. NEW & REVISED PROPOSAL REVIEWS (Afternoon, 4 March)

253-Rev. - Shatsky Rise: Seismic stratigraphy and sedimentary record of Pacific paleoceanography since the Early Cretaceous. Category: 5

Reviewers noted that there has been only sparse recovery of organic carbon-rich shale during 8 previous DSDP/ODP holes. Better recovery is critical to be able to determine timing and synchronicity of Cretaceous carbon rich events. The DCS would be necessary for this improved recovery, thus the proposal would not be drillable in 95. Otherwise, the proposal is mature. The basement drilling objectives are not clearly related to the other objectives of the leg. It was suggested that the rise itself may be part of the Cretaceous volcanic event but others doubted a relation between carbon events and formation of the rise. The message to be given to the proponents is that better justification for basement drilling is needed.

333-Rev. - Tectonic And Magmatic Evolution Of A Pull-Apart Basin: A Drilling Transect Across The Cayman Trough, Caribbean Sea. Category: 1 (not within panel mandate)

340-Rev. - Neogene/Quaternary collisional tectonism and foreland basin development across the Northern Australian Margin. Category: 3

The revised proposal addresses previous criticisms of TECP. Some questioned whether this is the best place to address the thematic objectives and if the drilling strategy of widely distributed holes rather than a focussed transect was appropriate. The fluid flow hypotheses are basically a cartoon and it is not clear how these could be distinguished by drilling. The final consensus was that in its present form the proposal does not adequately address SGPP objectives. More input from sedimentologists and hydrologists would be required to move it more within SGPP mandate.

347-Rev. - Late Cenozoic Paleoceanography, South Equatorial Atlantic. Category: 2/3

Several members commented that this is an example of exciting "big picture" science, but felt that it is primarily in OHP's mandate. Geochemical methods are not spelled out and geochemical budgets are not addressed in sufficient detail to be of interest to SGPP. The drilling as proposed is likely to require more than one leg.

367-Add. - Sedimentation history of a cool water carbonate continental margin, Southern Australia. Category: 4

Only one panel member had seen the original proposal. The addendum is basically a progress report to keep the proposal alive. This may not be the best place to address seal level questions. It would make a nice comparison with NW Europe chalk and a good on-shore/off-shore study of temperate water carbonates, a powerful analogue of the Paleozoic. However, the proposal hinges on biostratigraphy that will not be available. The final consensus was that this remains an immature proposal and the panel awaits a revised version.

372-Add. - Cenozoic evolution of intermediate water circulation and vertical chemical gradients in the North Atlantic. Category: 3

The addendum proposes a third site, added to 2 in the original proposal. There was discussion of whether this was really an OHP or SGPP proposal. Some objectives related to carbon cycling were in the original proposal. The consensus in the end was that this is an OHP proposal based on its primary objectives to examine water circulation. The paleo-ocean chemistry components can only be read between the lines.

RECOMMENDATION: After the review of this proposal and the previous one, there was a discussion of a possible recommendation to PCOM that proposals which are more than 3 years old should be re-submitted as a full proposal with updated science, rather than simply amended via a letter progress report. There was a general consensus that this would be a good idea because of the turnover in panel membership and the longevity of panel memory.

408-Rev. - Miocene segmentation of the carbonate megabank covering the Northern Nicaragua Rise: Gateway opening for the initiation of the Caribbean Current. Category: 3

Most reviewers felt that this proposal is in OHP's mandate. Although the proponents want to test facies interpretations of seismic signatures and are interested in the sediment response to tectonics and sea level, the sedimentologic response is not sufficiently developed. The drill sites listed appear designed to meet OHP objectives. The panel has a strong secondary interest in this proposal and encourages the proponents to further develop sedimentologic ideas and to choose sites appropriate to sedimentologic objectives. Such revisions could move the proposal into the SGPP mandate.

412-Add. - The Bahamas Transect: Neogene/Quaternary Sea-Level Fluctuations and Fluid Flow in a Carbonate Platform. Category: 4

Objectives of this leg would be to examine the sedimentary response to sea level fluctuations and would attempt to trace fluid flow patterns. The addendum addresses many of SGPP's comments on previous versions. It was noted that the sea level

working group suggested that this should be the next sea level leg. The sedimentologic results could be compared to the proposed objectives of the New Jersey margin transect. Questions were raised about whether drilling could distinguish between fluid flow models. Input (preferably some modeling) from hydrogeologists could help to determine how fluid chemistry might be related to flow and used to constrain flow hypotheses. Stratigraphically controlled dolomite may be of interest here and diagenetic implications of the leg should be developed. Because site surveys have not yet been completed, this proposal remains immature.

419-Rev. - Convergence of Oceanic Lithosphere at the Eastern End of the Azores - Gibraltar Plate Boundary. Category: 1 (not within panel mandate)

422-Rev. - A Proposal for Ocean Drilling in the Southern California Borderland Province. Category: 4

This proposal is much revised from the version reviewed at the previous SGPP meeting and now includes 5 sites in 4 basins. Only 12.5 days of ship time would be required. This addresses SGPP interests in productivity fluctuations, anoxia and sedimentation history. Deeper drilling than is possible with piston cores would be required to penetrate the Pliocene section, hence the need for ODP drilling. In response to previous SGPP comments, proponents have added to diagenetic interests. Alkanone stratigraphy combined with oxygen isotopes could be useful (as suggested in the previous SGPP review) but have not been proposed. The fact that the California current is actually farther off-shore may be a weakness from OHP's perspective. There may be gas hydrates at some of the sites and it was noted that H₂S was a problem in Santa Barbara. Potential safety problems will need to be addressed by site surveys.

IV. OHP/SGPP JOINT SESSION (Morning, 5 March)

1. INTRODUCTIONS AND DESCRIPTION OF AGENDA

The purpose of the meeting was to discuss areas of mutual concern to the two panels. The following presentations were planned:

- a. Sea level presentation and discussion
- b. DCS history and progress
- c. Leg 138 correlation techniques
- d. News from SMP/IHP joint meeting
- e. Non-engineering wish list priorities
- f. Presentation of Advisory Structure Review Committee Report
- g. Discussion of areas of mutual OHP/SGPP interest

2. SEA LEVEL (Bob Carter)

Carter gave a presentation on sea level issues in the context of ocean drilling and of the interests of OHP and SGPP in sea level. The presentation was summarized in a paper distributed to all at the session (Testing models of global sea-level change and sequence architecture, R.M. Carter). He reviewed the development of two types of sea level "models": the global sea level curve and the sequence stratigraphic approach. The global sea level curve is based on the observation of unconformity bounded sequences in basin scale seismic and other data. It is not really a record of sea level but of onlap. The sequence stratigraphic model is not based on an experimental observation but rather on a thought experiment designed to predict what types of sediments should be deposited in response to a change in sea level. Tests of sea level should specify which model is being tested. He speculated that in most cases it is possible to test only one of the models although in a few cases it might be possible to test both. At the end of the presentation, Maureen Raymo offered an interpretation of the two panels' mandates: SGPP is interested in the sequence stratigraphic model while OHP is concerned with sea level curves. High resolution oxygen isotope records from pelagic settings are an important component of tests of the global sea level model, and fall clearly within

OHP's mandate. There was some discussion of what Leg 150, in its revised form, will contribute to sea level. As constituted now, it will not contribute to tests of the sequence stratigraphic model. Rick Sarg noted that the geometry of sequences can be affected by other factors besides sea level so a test of the sequence stratigraphic model should not be focussed on specific geometries shown in Carter's diagram but on the nature of the major packages (systems tracts).

3. DIAMOND CORING SYSTEM (Tim Francis)

Francis gave a presentation for the education of panel members on the history, development, and current status of the DCS. The DCS system is based on a mining industry standard which uses fast rotation and low weight on a diamond bit compared to the oil industry based roller cone bit which uses slow rotation and high weight on bit. Advantages of the DCS for ODP would be increased core recovery in some formations which are currently difficult. There is a Norwegian ship which uses a type of diamond drilling called "piggy back" on the continental shelf. In ODP, the Phase I DCS used the roller cone casing as a guide. The Phase II system, first tested in 1990 did recover some fractured basalt. However, the test of an improved Phase II system on Leg 142 failed at least in part because of a bent cylinder in the secondary heave compensation system. Software problems have also been identified. A land test with simulated heave is scheduled for Summer, 1993 to test the secondary heave compensation mechanics and software. If this is successful, a sea test scheduled for 1994 on Leg 157 will follow. Engineers would prefer this test to be in water depths of about 1500 m. Even if this improved Phase II model tests successfully, it will not be the optimized system required by ODP. Using the current design, it could take 30 hours to change a bit. A retractable bit is one option that would be considered for a Phase III design. Another type of diamond coring is a motor driven core barrel, and this was tried at Sylvania Guyot. This is even slower than the existing roller cone technology. Discussion ensued on when the system would be fully operational, on drilling rates, and on the ability to switch from APC to DCS on a single leg or to run multiple DCS legs. At the end of the presentation, Kate Moran noted that the panel chairs agreed at a recent PANCH meeting that there should be a cutoff date for DCS development given the large trade-offs and tight budget conditions of ODP. She pointed out the tradeoffs implicit in this time of severe budgetary restraints from continued DCS development (balanced against, e.g., shipboard computing environment improvements, core-core/core-log integration hardware and software, etc.).

4. LEG 138 CORRELATION TECHNIQUES (Teresa Hagelberg)

Hagelberg, a shipboard scientist on Leg 138, gave a presentation on the improved developments of core-to-core and core-to-log correlations in areas of continuous core recovery. After describing the history and accomplishments in this area on previous legs, Hagelberg described the scales of correlation on Leg 138 (1 - 10 m, core/log integration; decimeter-meter, shipboard composite depths; centimeter-decimeter, revised composite depths), the signals used in the APC hole-to-hole correlations (GRAPE wet bulk density, magnetic susceptibility, digital color reflectance), and the accomplishments in defining high resolution, continuous stratigraphies. Core-log comparisons showed the attenuation of signals in the logging record due to sampling times; the limit of core-log integration was at the resolution of 1 cycle/meter. Moran and Hagelberg discussed the offset between the mbsf and composite depth scales for both APC and XCB sections and the gaps between adjacent cores in a single hole, and noted that these effects are not completely explained by rebound from the elastic response for each lithology. Log-core integration thus requires some compression of the log scale. The coherence between GRAPE density and downhole density logs shows a drop-off at about 1 cycle/m, suggesting a log resolution of about 1 m. This is somewhat larger than the 0.45 m resolution reported by Schlumberger for their tools. Given the importance of high resolution, continuous stratigraphies on paleoceanographic legs, this warrants further investigation.

5. SMP AND JOINT IHP/SMP MEETING REPORTS (Kate Moran)

Moran discussed the issues from the recent SMP meeting, including the strategy for the improved computing system; progress on core-log integration systems; the SMP system of assigning watchdogs for upcoming legs to liaison between co-chiefs, thematic panels, and the science operator about lab needs; the plans for dry dock; and the concerns about core handling in gassy sediment environments like the Santa Barbara Basin. SMP has been pushing for new shipboard software but, recognizing limits to resources, has been trying to prioritize needs for upgrades. To enhance core-core and core-log integration, workstations have been purchased to allow computations of the types done on Leg 138. A natural gamma core device is being installed and data from this can be compared to downhole to core susceptibility. A new position of core-log integration specialist has been created for staffing of future legs. Software developments will rely on the scientific community. Peter de Menocal noted that LDEO is working on a general platform for such developments. SMP has assigned watchdogs for upcoming legs and panels are encouraged to communicate concerns about shipboard measurements needs to the watchdogs. The Santa Barbara experience suggests that special handling is required to deal with shallow cores in gas rich environments. Peter Swart suggested that perforated liners would be desirable for such cores.

With Brian Huber's input, the joint IHP/SMP sessions were described. Topics included: the corrections to the GRAPE system needed for high porosity environments (ODP GRAPE Evaluation: A Report to the JOIDES Shipboard Measurements Panel by J. Lloyd and K. Moran; handed out to all present); paleontological software for data acquisition; the need for the integration of information and guidelines for sample handling of the on-shore holes as part of the New Jersey margin transect; the recommendation for co-chiefs to have more responsibility in environments with low recoveries, including reduced scientific parties and/or alternate staffing schemes; the possibility of changing core archiving procedures to provide more material in the working half; and issues related to data handling.

6. NON-ENGINEERING WISH LIST PRIORITIES (Kate Moran)

The non-engineering priority list compiled jointly by SMP, IHP and DMP was the following: 1. Navigation, 2. WSTP upgrade, 3. Multisensor track upgrade for natural gamma, 4. Discrete resistivity, 5. Bar code readers and printers for core labeling, 6. Seismic workstation, 7. Resistivity imaging, 8. Seismic towing system, 9. XRD upgrade, 10. Hardrock velocimeter. There was general agreement from OHP members that these needs were adequately represented with this list. OHP members discussed the need for a micropaleo-reference collection, either a physical collection or some type of CD-ROM, and suggested that this be added to the list. McKenzie noted that one item on the list, the WSTP upgrade, was of particular interest to SGPP and that most of SGPP's wish list items are in the engineering realm. Peter Swart noted that procedures for X-ray samples on ship are not well established.

7. ADVISORY STRUCTURE REVIEW COMMITTEE REPORT (Bill Hay)

Hay gave an overview of the ASRC process and its report, preliminary to holding discussions with each panel individually. He described the sections of the report dealing with white papers, the role of the thematic panels, the relationship with other programs, the role of SSP and PPSP, the composition of panels and shipboard parties, the role of PCOM, the handling of drilling proposals, and thematic synthesis volumes.

8. DISCUSSION OF AREAS OF MUTUAL OHP/SGPP INTEREST

The panel chairs outlined some areas of mutual interest to the two panels, including sea level investigations and paleocean chemistry.

LUNCH BREAK

IIIB. NEW & REVISED PROPOSAL REVIEWS (contd. Afternoon, 5 March)

423-Rev. - Gas Hydrate Sampling on the Blake Ridge and Carolina Rise: A Proposal to the Ocean Drilling Program. Category: 5

The panel agreed that this is an excellent proposal. It now includes specific sites and is therefore mature. The panel felt that given the Cascadia experience, it might be safe and very interesting to drill through the BSR, and recommended that proponents prepare an addendum for the fall meeting suggesting one or more sites for drilling through the BSR. A safety pre-review should be conducted at the October PPSP meeting. There seemed to be consensus that the leg would be useful even if sampling capabilities of the pressure core barrel have not improved. Comparison with results of Cascadia drilling should be encouraged.

424-Rev. - JOIDES Proposal to "Cork" Hole 395A, Preceded by Limited Hydrogeological Experiments. Category: 5

The panel agreed that the scientific justification for this is well presented in the revised proposal. There was considerable discussion of the scheduling suggested by proponents. The panel recommended that time for this activity not be subtracted from Leg 158 TAG.

426 - Mantle reservoirs and mantle migration associated with Australia-Antarctic rifting. Category: 1 (not within panel mandate)

427 - High-resolution sequence stratigraphy and sea-level history, South Florida Margin. Category: 4

It was noted that most sites proposed are in very shallow water and could not be drilled by ODP, in part because of strong currents. There was general agreement that this was a good area to study sedimentary architecture but is likely to have biostratigraphic and chronostratigraphic problems due to reworking that would preclude use for tests of sea level curves. It was noted that vibracore system could be important for sand recovery here.

428 - The Quaternary igneous seafloor and hydrothermal sulfide deposits in the South Tyrrhenian (Marsili Deep and Palinuro Volcano). Category: 1 (not within panel mandate)

Objectives at the Marsili Deep are primarily LITHP. Volcanogenic sulfides at the Palinuro Volcano are within the SGPP mandate. However, the proponents have not made use of (or seen?) some existing data and the current proposal is relatively vague and unfocussed. In its current form, the proposal is basically outside the SGPP mandate, but proponents are encouraged to prepare a more focussed proposal to address metallogenic objectives.

429 - The Atlantic-Mediterranean Gateway: Paleooceanographic and sedimentary process implications of the late Cenozoic gateway evolution from open-ocean Tethys to Betic-Rif bichannel to Gibraltar unichannel system. Category: 4

Elements of this proposal that are of interest to SGPP are contourites and turbidites, which proponents hope to use to identify flow reversals. Several reviewers doubted whether the questions posed, which reviewers found quite interesting, could be answered by drilling. The consensus was that this is currently an immature proposal.

430 - Subantarctic Southeast Atlantic transect (Sub-SAT). Category: 3

The neogene paleoclimatic objectives of this proposal are principally of interest to OHP. Changes in productivity and biogeochemical cycles objectives are not well developed but would be of interest to SGPP. One reviewer suggested that another site at intermediate water depths of approximately 1000 m would be useful for productivity

studies. With additional focus on methods for assessing productivity and more explanation of paleo-ocean chemistry objectives, this proposal could move into the SGPP mandate. A site survey is required.

431 - Western Pacific Network: Interaction of subducting plates and mantle. Category: 1 (not within panel mandate)

This proposal, although outside SGPP mandate, is an interesting because of important links to RIDGE. It is likely to fall between the cracks of the mandates of most panels. In principle, SGPP supports this type of proposal, but it is not within our mandate.

SR-Rev. - Sedimented Ridges II. Category: 5

Although the site forms were not included in this proposal, the panel recognizes that they could be filled out from existing data and the proposal is therefore mature. There were questions about whether this proposal was a product of the detailed planning group or of the proponents listed. There were some questions about comparisons of the sulfide deposits given that those at Escanaba are volcanogenic while those at Middle Valley are sediment hosted. In order to develop a 3-D geometry of the mounds, it will be necessary to go relatively deep compared to the shallow drilling on the previous leg. There were questions of whether this would require the DCS. DCS use is not mentioned in the proposal, probably because of recognition of its tentative current status. There were questions regarding the proposed hydrologic experiment given the disparity between the corked interval in which monitoring would occur and the shallow depth of the proposed hole. Distances between the new hole and the corked hole may also need to be examined more carefully. Perturbations due to incomplete sealing of a nearby pilot hole were observed in the corked hole initially. Questions about continued interference from the pilot hole should be addressed by analysis of additional cork data as it is retrieved. High temperature logging tools may be needed for this leg (as they are for the planned Leg 158 TAG).

IV. 1993 GLOBAL RANKING

The Global Ranking was done in a two-step process because of the relatively large number of proposals being considered. All active proposals (27) previously listed as category 4 or 5 proposals by SGPP were considered for a preliminary discussion of which to include in the ranking and which would be drillable. The following proposals were eliminated from the ranking on the basis of the reasons briefly listed along with proposal number:

332-Rev3. - Was not ranked in 1992 as a result of deficiencies noted by the panel, Paull who is a proponent suggested this be left off the list as he has another proposal in the ranking.

337 - A new proposal is anticipated and the panel will wait to review it.

338-Add. - This is an old proposal and the addendum is only a letter of intent. The panel will wait to review a new proposal.

345-Add. - The panel feels this is not the right place for a sea level leg.

355-Rev2. - This is a generic gas hydrate leg. A mature gas hydrate proposal now exists and will be ranked in lieu of this one.

367-Rev. - This is an old proposal in need of revision.

373 - Objectives are more in line with LITHP/TECP mandate.

378-Rev. - This proposal is replaced by the scheduled Leg 156 to Barbados.

379 - Objectives of this proposal have been incorporated into the revised proposal 330.

417 - This is too immature to rank.

429 - Panel members doubted that drilling will solve the problems posed.

The remaining 16 proposals to be considered for the global ranking were as listed:

253Rev. Shatsky Rise, Deposition of Organic Carbon-rich Strata

330Rev.	Mediterranean Ridge Accretionary Complex
368	Jurassic Pacific Crust: A Return to Hole 801C
380Rev3./059	VICAP/MAP
386Rev2.	California Margin Drilling
391Rev.	Formation of Sapropels in the Mediterranean
400Add.	Mass Balance/Def. Mech., Middle Am. Trench/Costa Rica
404	Neogene Paleo. from W. North Atlantic Sediment Drifts
407	N.Atlantic Shallow Mantle Geochemical Anomaly
412, 412Add.	Bahamas Transect
420	The Evolution of Oceanic Crust
422	Santa Monica Basin
423	Gas Hydrate Sampling, Blake Ridge and Carolina Rise
424	To "Cork" Hole 395A
427	South Florida Margin Sea-Level
SR-Rev.	Sedimented Ridges II

These 16 proposals were then ranked by the votes of the panel members, with the top ranked proposal being No. 1. It was noted that the ranking of 391-Rev (Med. Sapropels) would be based on the combination of the original proposal, which focussed on geochemistry, and the later revision. The panel anticipates the submittal of a revised, combined proposal prior to the Fall prospectus for FY 95. Proponents were excluded from voting on their own proposals. Scores were assigned by normalizing rank to number of votes cast. The results are basically consistent with the results of previous global rankings. The top 6 proposals in the SGPP Spring Global Ranking 1993 were considered for their drillability and are as follows:

SGPP Spring Global Ranking 1993

Ref. No.	Proposal (ODP Number)	Drillable in FY95	Score	Ranking
423	Gas Hydrate Sampling	yes	14.9	1
412, 412Add.	Bahamas Transect	yes	13.1	2
380Rev3./059	VICAP/MAP	yes	12.2	3
391Rev.	Mediterranean Sapropels	yes	11.7	4
400Add.	Middle Am. Trench/Costa Rica	yes	11.2	5
SR-Rev.	Sedimented Ridges II	yes	9.9	6

The remaining proposals were ranked as follows:

330Rev.	Mediterranean Ridge	9.5	7
422	Santa Monica Basin	8.8	8
404	W. North Atlantic Sediment Drifts	7.9	9
424	To "Cork" Hole 395A	6.9	10
253Rev.	Shatsky Rise	6.6	11
386Rev2	California Margin Drilling	6.5	12
427	South Florida Margin Sea-Level	5.6	13
407	N.Atlantic Mantle Geo. Anomaly	3.9	14
368	A Return to Hole 801C	3.2	15
420	The Evolution of Oceanic Crust	2.9	16

On Saturday morning, following a discussion of the fact that the current drilling program of Leg 150 New Jersey Transect would not meet the original SGPP thematic objectives for this leg and given some encouragement that safety surveys might be possible, the majority of the panel decided to make a second ranking of the top 6 ranked proposals, as listed above, plus a New Jersey Margin II. SGPP wanted to send a strong message that it considered completion of the New Jersey Transect essential for achieving the stated sea level objectives, as outlined in the proposal and the Sea Level

WG Report. The outcome of this final vote, and the names of the watchdogs assigned to each proposal, are listed below:

Ref. No.	Proposal (ODP Number)	Score	Ranking	Watch Dog
423	Gas Hydrate Sampling	6.7	1	Swart
----	New Jersey Margin II	4.5	2	Paull
412, 412Add.	Bahamas Transect	4.4	3	Sarg
391Rev.	Med. Sapropels	3.6	4	McKenzie
380Rev3./059	VICAP/MAP	3.5	5	Hiscott
400Add.	Middle Am. Trench/Costa Rica	2.8	6	Underwood
SR-Rev.	Sedimented Ridges II	2.2	7	Sayles

There was also a discussion of OHP's objections to the Bahamas Transect proposal, particularly to a diagram representing stratigraphic correlations. The panel recommends that the proponents prepare a correction to the diagram and come back with answers to OHP's concerns. SGPP concluded that its mandate relates to sedimentary architecture and its response to sea level changes, a component in the proposal which is addressed and well developed by the proponents.

V. REPORT ON GEOCHEMICAL RESULTS, LEG 146 (Miriam Kastner)

Kastner described the salinity and gas profiles measured in two locations during the leg, as well as the use and effectiveness of several downhole and shipboard measurement or sampling tools. Two main objectives of the leg were to 1) compare fluid regimes off Vancouver (assumed to be diffuse flow) and Oregon (assumed to be channelized) and 2) determine the origin, location and meaning of the BSR. She noted that the drilling was perhaps not a true test of the first question because the site off Oregon was chosen to intersect a fault, while off Vancouver they avoided faults. No gas hydrates were recovered off Vancouver but a temperature measurement in one core indicated hydrate sublimation. The interpretation is that hydrates are probably disseminated rather than massive. A salinity low in a permeable sand lens at approximately 130 mbsf did not correspond to the position of the BSR. At the depth of the BSR, the salinity profile was essentially vertical and concentrations were approximately 38% lower than sea water. Measured gas compositions indicated that gas is dominantly methane, with a little ethane and very little propane. As noted previously by Casey Moore, there is a discrepancy between the depth of the BSR and the theoretical depth predicted for methane hydrates. Two possible explanations for this are that 1) stratigraphic controls affect an uneven hydrate accumulation or 2) the hydrates are not pure methane-water. Kastner noted that many on the ship were not convinced of the low velocity break in slope at the BSR, as interpreted by the geophysicists from the vertical seismic profile.

At the second location off Oregon, gas hydrates were recovered from very shallow depths and high concentrations of H₂S were also found in shallow cores, suggesting the presence of H₂S hydrates. Local biogenic production or transport along the fault were possible sources for the H₂S. A shallow biogenic source seems more likely given that the H₂S (and the hydrates) were not encountered in deeper cores from closer to the fault zone. The chloride profile showed a series of "spikes" above the BSR. Low chloride zones appear to correlate with "soupy layers" in the core, suggesting a lithologic control on hydrate accumulation (assuming that the low chloride was the result of hydrate disintegration). Again, there is a discrepancy between the depth to the BSR and the hydrate stability field.

Kastner also described several tool and operational problems during the leg. She noted that the pressure core sampler (PCS) did not work and is not now capable of recovering hydrates. She felt the use of the WSTP for in situ water sampling was a waste of ship time. It only works in sediments where a hydraulic piston core would

work just as well to recover squeezed pore-water samples. She urged the panel to push for development of tools for in situ pore water sampling. An additional problem she encountered was that the adherence to "standard procedures" for core handling prevented rapid sectioning of cores and immersion into liquid nitrogen which might have preserved hydrates. There was discussion of the need for prior arrangements to allow flexibility and the need for co-chief involvement in such decisions.

VII. STATUS OF TOOLS (Andy Fisher, Tom Pettigrew)

WSTP - This was originally designed as two separate tools, one for temperature measurements and one for sampling. Fisher noted that ODP does not have a tool development budget. Thus, it was developed as a third party tool. \$15,000 was provided in 1991 to modify the tool for Leg 139 and the result was a shortened temperature probe and an expanded sampling tube. The temperature recorders are quite noisy. A request for quotes has been issued for improved recorders of the type used on the ADARA tool. Fisher described additional possible modifications to improve sampling capabilities. Discussion of this tool by Peter Swart and Miriam Kastner focussed on the fact that it only works in sediments from which squeezed samples can already be collected. Temperature measurements with the ADARA tool, which adds about 15 minutes to the cutting of an APC core, have been of better quality than those from the WSTP. This discussion concluded with a question of whether continued development of the WSTP is worthwhile and should be included in SGPPs non-engineering wish list.

Pressur Core Sampler (PCS) - Pettigrew noted that this tool has never had a "champion" so it is basically the engineers' idea of what might work. Continued modifications are planned for the Phase I tool including alternate designs for core catchers and elimination of a back pressure valve to improve pressure retention. They are also developing a manifold to extract gases and a method for pushing the (depressurized) core into a plastic liner. The new cutting shoes should be ready by Leg 151 (?) and could be used at Barbados. The PCS is not expected to work in sandy layers. The discussion indicated that significant progress with the Phase I PCS is possible, without going into the Phase II development (design of extraction equipment for removal of pressurized core from the sampler). The panel agreed to recommend that there be continued field testing of the PCS, specifically on Leg 150. Charlie Paull should be the person to push for testing since the PCS is important to the proposed gas hydrate leg.

Fluid Sampling RFP - A revised RFP has been prepared but has not been released. The panel supports this strongly, as it applies to hard rocks which cannot be squeezed and for which there are currently no tools for fluid sampling.

GEOPROPS - Kastner commented that this tool was poorly thought out because it requires a very clean hole, something that will not be obtained in ODP. Pettigrew stated that the concept of this tool is ok but the tool itself is hopeless due to the opportunities for leaks and poor hole conditions.

Vibrapercussive core - This was deployed on Legs 133 and 146 in attempts to recover unconsolidated sediments. The source of problems on Leg 133 were not clear. In one attempt on Leg 146, circulation and vibration failed both in the hole and on deck. Computer modeling has identified some design problems that make the corer subject to stalling and indicated that it will not be able to penetrate sediments as designed. Pettigrew has been in contact with a firm that is developing a vibracore for sand bailing in the oil industry (to work in 2000 ft of water). If this works or can be made to work under ODP conditions, it could be a candidate tool for rental or purchase. This could be important for the Amazon Fan leg.

CORKS - Sand caved into the perforated liners used for corked holes on Leg 146. In retrospect, Pettigrew believes that he should have used gravel packed screens. The Barbados watchdog (Swart) should follow up to make sure provisions are taken to have appropriate screens available for the leg.

LUNCH BREAK

VII. COORDINATION WITH OTHER PROGRAMS

RIDGE and INTERRIDGE - Jacques Boulegue outlined the history and objectives of these programs which are concerned with flow of the mantle, conversion of magma to oceanic crust, accretion of the lithosphere, interactions of sea water and the lithosphere, mid-ocean ridge environments and hydrothermal venting. Monitoring activities are planned for portions of the Juan de Fuca Ridge and the East Pacific Rise, as well as the area around TAG. At TAG, there is potential for collaboration on pre-drilling site characterization, monitoring during drilling and post-drilling monitoring. It was noted that the TAG proponents are also major players in RIDGE. In general, drilling can be seen as a complementary activity to RIDGE monitoring. Both programs have needs for high temperature tool development.

COMFAN - Richard Hiscott stated that this committee on submarine fans is an ad-hoc group that has held two meetings. The group has no formal structure and any future meetings are likely to be at the instigation of a key individual. Many of the past participants are involved with the Amazon Fan leg and it is possible that a meeting may be called after that leg.

Global Ocean Flux Program - Fred Sayles reported that only a few participants are interested in the bottom of the ocean. Most work in surface productivity. Overlaps with ODP are minimal, at least for US participants. Henry Elderfield remarked that the program in other countries might have more ties to issues of interest to our panel.

17. ADVISORY STRUCTURE REVIEW COMMITTEE (Bill Hay)

Bill discussed the 9 recommendations in the committee report with the panel.

- 1) With regard to the proposal to update the panel white paper, he noted that SGPP is fairly new compared to the other panels and it may be too soon for a complete revision of the white paper. In planning for the next 4 years, however, the panel should consider what can be delivered by 1998. Examples might be improved understanding of gas hydrates or sea level. A problem is that ODP results are often too subtle, at least from a publicity standpoint. Is it realistic to believe that any problem can be solved in 4 years? Another question for the panel to consider is whether we should encourage proposals that we think are unlikely to be drilled in the long run. Setting some specific goals might encourage more directed proposals. At the same time, there would be problems if each panel were to set down very limited goals that were ultimately not achieved. Goals for 1998-2003 should also be discussed, as these will influence engineering developments.
- 2) The second recommendation was that panels take an active role in soliciting proposals. [Note that SGPP has done this most recently in the case of gas hydrates.]
- 3) Overlapping of themes and a need for liaisons is not really a problem and there is a great deal of overlap in membership with various programs.
- 4) The proposal to abolish quotas for the Site Survey Panel in order to provide for more regional expertise was reported to have met with a very negative response from the Site Survey Panel chair. There are questions involving funding for safety surveys, since these are not strictly science and would not meet NSF guidelines. Hay's reading of the Safety Panel is that it has some members who will not approve shallow drilling under any circumstances. This could jeopardize a second leg on the New Jersey margin.

- 5) Revisions are proposed to term limits for panel members, while at the same time an attempt must be made to maintain coverage of disciplines and aid corporate memory by returning former panel members.
- 6) The proposal to choose the JOIDES office location on the basis of an RFP is intended to ensure that individuals in the head office are keenly interested in the program.
- 7) Panel chairs presented the proposals in the FY 94 Prospectus at the recent PCOM annual meeting, which McKenzie thought was a good idea because it enabled PCOM to hear the panel viewpoint. Perhaps, panel chairs should attend more or all PCOM meetings in order to relay panel objectives to PCOM. This could minimize problems created by having PCOM liaisons to the panels who are not familiar with the panel.
- 8) Proposal styles vary from country to country, which results in inconsistencies in content and format of ODP proposals. A proposal packet might aid applicants and help avoid misunderstandings. A bigger problem is how to coordinate ranked proposals and remove some of the politics of scheduling from PCOM. The committee considered a planning group with a regional focus. Some wondered if a subset of PCOM could do this. It was noted that since PCOM only includes representatives of JOIDES institutions, a large source of talent is left untapped in this planning stage.
- 9) Thematic panels should encourage and serve as a catalyst for synthesis volumes.

The report of the Advisory Structure Review Committee will go to EXCOM in June.

IX. CLOSING OF MEETING

Henry Elderfield, SGPP member-at-large, will rotate off the panel after this meeting. He is heartily thanked for his long service and contributions to the panel since its beginnings in 1989. Peggy Delaney is acknowledged and thanked for her efforts in organizing a very pleasant and smoothly run "double-panel" meeting. Cheryl Erickson and Robert Garrison are heartily thanked for a memorable pre-meeting field trip to the Monterey Formation and local scenery, which they led with the help of UCSC graduate student drivers. The meeting ended at approximately 3:15 on Saturday, 6 March.

The 1993 Fall Meeting, a joint SGPP/TECP meeting, will be hosted by Richard Hiscott on 18-21 September 1993 in Corner Brook, Newfoundland. Invitations for the 1994 Spring and Fall meetings have been received from Charles Paull (Chapel Hill, NC) and Wonn Soh (Shizuoka, Japan), respectively.